

Date: Tue, 27 Jul 93 14:14:23 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #908  
To: Info-Hams

Info-Hams Digest                      Tue, 27 Jul 93                      Volume 93 : Issue    908

Today's Topics:

                    20/20 and ham radio  
                    Alinco DR1200  
                    Amateur Radio public service  
                    Computer based quizer for almost-tech?  
                    difference between 4X250B & 4CX250 tubes (2 msgs)  
                    Fixing the books  
                    help wanted w/ homebrew TX  
Latest modes of operating and highest frequencies ?  
                    Need NCX-A Pwr Supply Schematic  
                    Old Radio Device  
                    Opinions wanted: DJ-580 vs. FT-530  
Range? Portable Transceivers 2 Watt.  
                    RTTY-Scotch log  
                    S meters and modern technology  
                    TS50 Illegal!

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Mon, 26 Jul 93 21:10:50 MST  
From: pravda.sdsc.edu!news.cerf.net!usc!cs.utexas.edu!asuvax!ennews!stat!  
david@network.ucsd.edu  
Subject: 20/20 and ham radio  
To: info-hams@ucsd.edu

Mike\_Beezley.houstoncssc@xerox.COM writes:

> >> I had to work pretty hard to discern the back end of a tribander in one  
> of the outdoor shots <<  
> You were sharper eyed than I. I musta blinked when that scenee was on  
;-)

There is no tribander ... a bunch of monobanders on a rotatable tower.  
I used to operate k7uga/wa7uga/afc6bg when Barry's station was still in  
the MARS program ... I could generate some good pileups with the WA7UGA  
call ...

david

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Internet: david@stat.com FAX: +1 (602) 451-6135  
Bitnet: ATW1H@ASUACAD FidoNet=> 1:114/15  
Amateur Packet ax25: wb7tpy@wb7tpy.az.usa.na

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Date: 27 Jul 93 18:04:04 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Alinco DR1200  
To: info-hams@ucsd.edu

Rajiv, aa9ch, said:

You can buy a brand new Alinco DR1200 for \$225. (or a used one for  
\$175). It comes with display, zillions of channels, pl encode/decode,  
25W and is much smaller. (DTMF Mic is extra - \$33).

I say (realising the time has finally come to get a mobile/base station):

Where did you find it so cheap, Rajiv -- cheapest I can find it in QST is \$249.

Anyone else have good or bad opinions on this rig? Is it a wide or  
narrow front end? Anyone using this for non-packet use? Recommended dealers?

Inquiring minds and all that ...

Kevin Purcell N7WIM / G8UDP  
a-kevinp@microsoft.com  
Sit simplex, stulte!

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Date: 27 Jul 93 16:52:44 GMT  
From: ogicse!flop.ENG.RST.EDU!gaia.ucs.orst.edu!umn.edu!csus.edu!netcom.com!

steve@network.ucsd.edu  
Subject: Amateur Radio public service  
To: info-hams@ucsd.edu

In article <M1-UsAjjBh107h@GRAFex.Cupertino.CA.US>, ka6etb@GRAFex.Cupertino.CA.US (KA6ETB Steve Harding) writes:

> I imagine that most new amateurs gain their license through study sponsored  
> by local amateur radio clubs. It should be a part of their training. It  
> should also be a part of the licensing examination, IMO.

Not arguing with what you are suggesting as for the licensing exam, but direct experience denies you statement that most hams now come into the hobby via training done by a local ham club. In our(Steve and my) ARRL section alone we only have 4 of the affiliated ham clubs offering classes! Note they are generally the most active clubs with the highest number of new members(wonder why? ;-)

Simple fact is that with the advent of the no-code most hams are coming into the fold via self-study and never even meeting another amateur until they first get on the air!

Steve KA6S

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Date: Tue, 27 Jul 1993 03:01:43 GMT  
From: nwnexus!a2i!bromgrev@uunet.uu.net  
Subject: Computer based quizer for almost-tech?  
To: info-hams@ucsd.edu

I've seen a program for the Mac that has the full pool of questions for a tech license and puts together fake test and grades you and the like... Is there one out there for OS/2 or DOS on an Intel box? Is there a good FTP site where I could find this? If not, could someone be a real sport and FTP it into rahoul.net in /pub/bromgrev? Tlx.

--  
Carl A. Merritt <bromgrev@rahul.net>

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Date: Tue, 27 Jul 93 15:04:53 GMT  
From: pipex!uknet!uos-ee!ee.surrey.ac.uk!M.Willis@uunet.uu.net  
Subject: difference between 4X250B & 4CX250 tubes  
To: info-hams@ucsd.edu

In article <9307271213.AA01653@umassmed.UMMED.EDU>, ahall@umassmed.UMMED.EDU (Art Hall) writes:

|> I am looking for information about two tubes - 4X250B and 4CX250. My  
|> amplifier uses the 4X250B and I would like to know if I could use the  
|> 4CX250 as replacement.  
|>  
|> WB3EJA Art Hall  
|> ahall@umassmed.ummed.edu

I think the difference is that the 4x250B has a glass construction whereas the 4cx250B has a ceramic construction. This makes the 4cx250B more robust as the metal

to ceramic seals are capable of withstanding higher temperatures.

Therefore I think it is not a good idea to replace a 4cx250B with a 4x250B. If the 4x250B tubes are electrically equivalent you may get away with it.

If you have a 4-250A then it is not the same as it is designed to operate at a higher plate voltage of 4 kV, with 600V on the screen, presumably as a driver to a big triode. I am not even sure this looks the same as I have never seen one.

Mike

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Date: 27 Jul 93 18:57:18 GMT  
From: ogicse!hp-cv!sdd.hp.com!col.hp.com!news.dtc.hp.com!srigenprp!  
alanb@network.ucsd.edu  
Subject: difference between 4X250B & 4CX250 tubes  
To: info-hams@ucsd.edu

Art Hall (ahall@umassmed.UMMED.EDU) wrote:

: I am looking for information about two tubes - 4X250B and 4CX250. My  
: amplifier uses the 4X250B and I would like to know if I could use the  
: 4CX250 as replacement.

I think the 4 "C" X250 is the same as a 4X250 except that it has a "C"eramic base instead of glass.

AL N1AL

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Date: 27 Jul 1993 18:34:38 GMT  
From: nothing.ucsd.edu!brian@network.ucsd.edu  
Subject: Fixing the books  
To: info-hams@ucsd.edu

a-kevinp@microsoft.COM (Kevin Purcell, Rho) writes:  
>Why did the directors recently increase the requirements for  
>eligibility to become a Director?  
>...  
>They are cooking the books against dissent.

As with most older organizations, I rather expect that they fear change.

I would suggest an amendment that REQUIRES that one of the directors be a recently-licensed ham - i.e., one whose first license was granted fewer than 5 years ago.

- Brian

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Date: 27 Jul 93 03:52:01 GMT  
From: dziuxsolim.rutgers.edu!pilot.njin.net!furr@uunet.uu.net  
Subject: help wanted w/ homebrew TX  
To: info-hams@ucsd.edu

I'd like to look into building a homebrew transmitter and receiver. It could be a very basic one, from a 50-year-old design. I think I'd learn better what really makes them work.

Is there a group of hams who do this kind of thing? and who would provide encouragement? Either a group organized around building stuff (simple), or around building/restoring old radios?

I've been thinking about this for a long time, but have been inspired by an article in the latest QST about a veteran ham who did it. However, HE knew how!

Failing a group, then, a book with step-by-step instructions for a simple TX (even a very old book) would be welcome.

Please email replies to:

furr@saturn.montclair.edu

or post to the group. And thanks.

\* \* \* \* \*  
Grover C. Furr

Home: 121 Oakland Terrace  
Newark, NJ 07106  
ARS AA2GP

Work: English Department  
Montclair State College  
Upper Montclair, NJ 07043

email: Preferred: furr@saturn.montclair.edu (201) 655-7305  
Also valid: furr@pilot.njin.net  
furr@apollo.montclair.edu

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Date: Tue, 27 Jul 1993 14:14:21 GMT  
From: swrinde!gatech!wa4mei!ke4zv!gary@network.ucsd.edu  
Subject: Latest modes of operating and highest frequencies ?  
To: info-hams@ucsd.edu

In article <1993Jul26.155600.4990@uoft02.utoledo.edu> mohan@tulip.es.utoledo.edu  
writes:

>Hello,

>

>Amateur radio operators have been consistently using the latest advances in  
>Communications and other technologies. Recent trends like networking and DSP  
>are also increasing in use at a rapid rate.

>

>So, I am interested to know about the following :

- > 1. What the latest modes of operation
- > 2. Technologies used in Amateur Radio like DSP.
- > 3. Recent trends ...

The majority of amateurs continue to use FM, SSB, and CW modes for all, or most, of their operating. A large minority, 44% at the last count I saw, have packet capability. Mostly that's at 1200 baud AFSK, but some of us are running up to 56 kilobaud using MSK RF modems, and a hardy few experimenters are pressing on to 1 Mb using microwave equipment. The latest advance is Clover, a DSPed multi-symbol narrowband method for HF packet. Plus, there is increasing interest in both slow and fast scan ATV and FAX. Another mode with great promise, Spread Spectrum, is slowly gaining ground among amateur experimenters.

These modes are used on different ham bands from the traditional HF to the VHF/UHF/SHF spectrum. Many of the most exciting things are occurring in the upper reaches of our spectrum. Amateur satellites continue to be a major drawing card for experimenters, with both traditional modes and newer store and forward digital methods being employed.

DSP is the current buzzword in amateur radio, but actual applications remain few, mostly audio filter synthesis and modem simulation.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

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Date: 27 Jul 93 08:58:12  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
sol.ctr.columbia.edu!destroyer!csd475b!newsserv!majewski@network.ucsd.edu  
Subject: Need NCX-A Pwr Supply Schematic  
To: info-hams@ucsd.edu

Hello to all-

A friend of mine is trying to repair an NCX-A power supply. This is used with the National NCX-3 HF radio.

Does anyone have a schematic diagram for this unit that they would copy and fax/snail mail to me?

Thanks and 73!

Ron (wb8ruq).

snail mail: c/o ERIM	fax: (313) 994-0944
PO Box 134001	
Ann Arbor, Michigan 48113-4001	

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Ron Majewski (majewski@erim.org)

The Environmental Research Institute of Michigan

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Date: Tue, 27 Jul 1993 14:59:13 GMT  
From: spsgate!mogate!newsgate!news@uunet.uu.net  
Subject: Old Radio Device  
To: info-hams@ucsd.edu

A friend of mine has asked for help in identifying an early piece of radio equipment. It was given to him recently by a widow, and the information about it is limited. It came out of a cardboard box in an attic, and probably had not been touched since the 1960's. It is not something from Arizona, but was brought here from somewhere in the

eastern US.

The device appears to be some sort of tuner. It is said (notes on the storage box) to be circa 1918-1920, and consists of a roughly 7" cubical wood box mounted at one end of a 7x15" base-board. In the box is a large outer coil with many turns (couple hundred) and taps; inside it is another coil with many turns and about 9 taps; this coil is arranged to slide axially in and out of the larger fixed position coil - with one side of the box and the inner coil bonded to slide on a pair of wire 'rails' mounted between the box and the opposite end of the baseboard.

On the front panel of the box is a set of contacts and a wiper, to select any of perhaps 20 taps on the fixed outer coil; a similar tap selector is associated with the moving inner coil structure. There are two pairs of binding posts on the box, labelled "pri" and "sec" in stamped-in white lettering. The only other device on the front is a selector (wiper switch), with the marking "on" near one contact, "off" near another. No other markings appear anywhere else on this unit.

Another pair of binding posts was discovered inside the coil box - and closer inspection seemed to indicate a small coil (very few turns on perhaps 1/2" of length) at the far end inside the large fixed coil. Not too sure of this, as it is hard to see into the unit, even with the large inner coil moved out as far as possible

Found with this unit in the cardboard box was an old Ford spark coil in a wood container. Don't know if it was associated or not. Other data hand printed on the storage box include "NAVY tuning coil"; "loose coupler"; and "1918-1920". Also included in the box was an old (1950's?) advertisement from the Pittsburgh Press about KDKA. In it was pictured a similar sort of device - it was spoken of as a receiver, and had a pair of earphones connected to it. A large coil or coils were showing, as they were not enclosed in a box; this unit had no 'rail' structure, and may have had what looked like some sort of detector assembly screwed down on its baseboard.

Thoughts and questions:

- a. It was the tuning portion of an early radio? Commercially made, or homebrew? The workmanship looks quite good.
- b. It was used with the Ford spark coil to make some sort of transmitter?  
- No detector or headphone connections are apparent (other than the binding posts).
- c. It was some sort of tuning unit used by the Navy, WWI era? Maybe they adapted civilian or homebrew equipment?



The owner of this device would appreciate any suggestions as to what it was, and guidance on whether or not any museum would like to have it.

Please reply by email to [aztynan@indirect.com](mailto:aztynan@indirect.com).

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Date: 27 Jul 1993 18:42:35 GMT  
From: [nntp.ucsb.edu!mcl!uznerk@network.ucsd.edu](mailto:nntp.ucsb.edu!mcl!uznerk@network.ucsd.edu)  
Subject: Opinions wanted: DJ-580 vs. FT-530  
To: [info-hams@ucsd.edu](mailto:info-hams@ucsd.edu)

Subject pretty much says it all: While I'm sitting here waiting for the FCC to mail me my license, I'd like to gather some opinions as to which is the better dual bander for the money: the Alinco or the Yaesu.

A couple friends of mine have the Alinco DJ-580 and I'm pretty impressed with it. However, they say that they wish they had more memories, which I understand the Yaesu has. Is it worth the \$40-\$50 more for the Yaesu just to have more memories? Or are there other features present on the Yaesu that would justify the higher price.

Thanks in advance,  
-AK

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Andrew Krenz -- [uznerk@mcl.ucsb.edu](mailto:uznerk@mcl.ucsb.edu) | [krenz@engrhub.ucsb.edu](mailto:krenz@engrhub.ucsb.edu)  
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Date: 27 Jul 93 03:54:05 GMT  
From: [gatech!europa.eng.gtefsd.com!howland.reston.ans.net!agate!msuinfo!uwm.edu!linac!convex!news.oc.com!merlin.etsu.edu!jdavis@RUTGERS.EDU](mailto:gatech!europa.eng.gtefsd.com!howland.reston.ans.net!agate!msuinfo!uwm.edu!linac!convex!news.oc.com!merlin.etsu.edu!jdavis@RUTGERS.EDU)  
Subject: Range? Portable Transceivers 2 Watt.  
To: [info-hams@ucsd.edu](mailto:info-hams@ucsd.edu)

Russ Curry ([curry@sctc.com](mailto:curry@sctc.com)) wrote:

- > Roughly speaking, what's the effective transmit range
- > of those little Handheld Transceivers ( 2 Watt/ 2 Meter )
- > in miles ( under optimal conditions? )
  
- > Thanks,

> Russ Curry  
> ( curry@sctc.com )

Hello Russ,

I've got an HT with 2.5W out using the built-in battery. Under normal conditions, about 10 miles is all I can really count on getting a readable signal out. I can hit a repeater about 20 miles from me but that's only "hitting" it. With an external battery to get the HT's full 5W output and an external homemade j-pole antenna, I have talked to a station simplex about 90 miles during a band opening. BTW, my HT is a Kenwood TH-28A. I'm not sure where you're QTH is, but, around the southern part of the country, there have been some major band openings on 2m the last few nights/mornings.

73, Jason  
KB5YBP  
"Yellow Banana Peel"

--

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  /| Jason Lee Davis KB5YBP (903) 886-2903 <jdavis@merlin.etsu.edu>  |\
||/_| Shiloh Productions sound co. _____ <jdavis@wizard.etsu.edu>  |_\\|
||\ | Rt. 1 Box 175 ( _ |_) <s2903d@etsuv2.etsu.edu>  | /||
 \| Klondike, Texas 75448 _____) | _____ <s2903d@etsuvax2.bitnet>  |/
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"I'm lost! I've gone looking for me. If I should return before I get back, please tell me to wait."

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Date: 27 Jul 1993 13:41:12 GMT  
From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!spool.mu.edu!caen!  
malgudi.oar.net!news.ysu.edu!yfn.ysu.edu!ag821@network.ucsd.edu  
Subject: RTTY-Scotch log  
To: info-hams@ucsd.edu

I have been thinking about getting into RTTY contesting. I have a program called Scotch log.. freeware.. can't seem to get it to work.. but looks pretty good.. having trouble getting it to communicate with my 232MBX.. may have to bit the bullet and get the standard WF1M or whatever it is

thanks

Jeff, AC4HF

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Jeff M. Gold, AC4HF  
Manager, Academic Computing Support  
Tennessee Technological University

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Date: 27 Jul 1993 12:50:40 GMT  
From: pravda.sdsc.edu!news.cerf.net!usc!sdd.hp.com!col.hp.com!  
bobw@network.ucsd.edu  
Subject: S meters and modern technology  
To: info-hams@ucsd.edu

By the way, I measured my Kenwood TS-430S S-meter characteristics once and was surprised that it actually follows the 6-dB "standard" pretty well (considering its consumer electronics and not a test instrument).

More recently, I measured 4 or 5 different FM VHF/UHF rigs (handhelds and mobile transceivers). The typical "S-unit" size was 1 to 2 dB. I believe this is driven by the FM nature of the beast, but I haven't given it any further thought.

The interesting thing is that just a few dB of signal change will make your typical repeater user think the repeater's power level have changed dramatically. ("The repeater's output is down 2 S-units, Jed, so it must be 12 dB lower than normal.")

Bob

-----  
Date: 27 Jul 93 15:10:49 GMT  
From: ogicse!emory!rsiatl!ke4zv!gary@network.ucsd.edu  
Subject: TS50 Illegal!  
To: info-hams@ucsd.edu

In article <CAstr4.K3n@srngenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>Gary Coffman (gary@ke4zv.uucp) wrote:  
>: In article <9307261321.AA04240@opus.xyplex.com> sasminkey@eng.xyplex.com  
writes:

>: >I have no idea what 40 watts carrier would be in PEP power, since PEP is  
>: >such a silly way to measure emission types that have a carrier like AM, CW,  
>: >and FM. ...

>: Assuming 100% modulation, 40 watts carrier would be 60 watts PEP.  
>

>Assuming 100% modulation, 40 watts carrier would be 160 watts PEP.  
>PEP power is 4 times the carrier (i.e. twice the voltage) for 100%  
>modulation AM.

>

>Gary was confused by the fact that 100% modulating a 40 watt carrier  
>gives you 20 watts of sidebands, for a total AVERAGE power of 60 watts.  
>The peak envelope power is, however, 160W.

Err, ah, I may still be confused, but I think this is wrong too.  
According to Reference Data for Radio Engineers, pg 529

Peak voltage =  $(1+Ma) \times \text{carrier voltage}$

Peak current =  $\text{Sqrt}(1+Ma^2/2) \times \text{carrier current}$

Where Ma is the degree of amplitude modulation with 1.0 corresponding to 100% modulation (sinewave).

Now PEP is conventionally defined as peak voltage times peak current, and should be expressed in VA, not watts, since the two may not be in phase. Carrier power is constant in AM so we may arbitrarily set carrier voltage and current equal to 1. This gives

$\text{PEP} = (1+Ma) \times \text{Sqrt}((1+Ma^2)/2) = 2 \times \text{sqrt}(2) = 2.83 \text{ times carrier VA}$   
or in our case, 113.2 VA.

Whew! I thought this was going to be simple.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

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Date: Tue, 27 Jul 1993 11:05:52 GMT  
From: pipex!uknet!brunel!xxxxajh@uunet.uu.net  
To: info-hams@ucsd.edu

References <743500223snz@tedb.demon.co.uk>, <CArqoq.Ky@brunel.ac.uk>,  
<743734833snx@llondel.demon.co.uk>pip  
Subject : Re: rsgb gb2rs news 25th july

In article <743734833snx@llondel.demon.co.uk> dave@llondel.demon.co.uk writes:  
>In article <CArqoq.Ky@brunel.ac.uk> Alan.Holmes@brunel.ac.uk (Alan J Holmes)  
writes:

>> >Good morning. It's Sunday the 25th of July and here is the GB2RS news  
>> >broadcast, prepared by the Radio Society of Great Britain.

>> Note that this article was posted on Sat 24 july. Most  
>> of us don't read it on Saturdays, so what on earth is the  
>> point of posting information about incidents taking place  
>> on Sunday when we will not read about it until Monday

>> morning at the earliest?

>Well I saw it on Saurday..... you often find the \*full\* news (inc all the  
>local stuff) is on uk.radio.amateur before the weekend starts. I think it  
>depends on what Ted's workload is as to when he manages to post it (and when  
>he gets it from HQ!)

>Note that what is posted to the net is basically the RSGB news as read out  
>on-air on Sunday mornings so you could always listen to the real thing if you  
>really want to know about rallies. Failing that, look in Radcom or another mag.

Now that's the rub, I'm not a member of RSGB, and I don't buy any  
mags. My memory is so bad I cannot remember to listen to the  
RSGB news. It would be useful to know in advance when things are  
taking place. Other than a brian (should be brain!) transplant I  
don't know what the answer is!

Regards

Alan Holmes G4CRW

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Date: 27 Jul 1993 13:39:58 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!math.ohio-  
state.edu!news.acns.nwu.edu!casbah.acns.nwu.edu!rdewan@network.ucsd.edu  
To: info-hams@ucsd.edu

References <1993Jul21.153450.28504@rsg1.er.usgs.gov>,  
<22pn2h\$40j@techbook.techbook.com>,  
<1993Jul26.203352.5754@midway.uchicago.edu>ah.acn  
Subject : Re: STILL waiting for your license? Read this and weep!

In article <1993Jul26.203352.5754@midway.uchicago.edu> hayward@cs.uchicago.edu  
(Kristin Rachael Hayward) writes:

>  
>W5YI and the ARRL VEC are very different in regard to how they handle  
>the backup paperwork. W5YI has the local examiner team keep the exams;  
>the ARRL has all of it forwarded to Newington where, as Bart  
>explained, they go over it with a fine tooth comb, and then they file  
>it in case anyone complains.

>  
>So, why is W5YI faster? Because they take the 610, make certain that  
>the top is filled out correctly, stamp it and send it to the FCC.

>  
>Why is the ARRL slower? They do a more thorough job and retain the  
>paperwork. Now, is one approach right and one wrong?

>

Kristin has a point here. I am accredited with ARRL-VEC, W5YI-VEC and GLARC-VEC (Great Lakes ARC). We had many more problems with W5YI than we ever did with others. Not that they are bad, they are just set up differently. Now I mostly work with Jim Georgias, W9JUG, who lives a few miles from me and runs the GLARC-VEC. Awfully convenient.

Rajiv

aa9ch

Address: r-dewan@nwu.edu

Phone: None on HF. Only CW.

Look for aa9ch/m on bottom end of 10m-80m.

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End of Info-Hams Digest V93 #908

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